

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1-2. (canceled)

3. (currently amended) An optical cross-connect apparatus, comprising:

a light switch having a plurality of first and second ports, which switches paths of light signals ~~inputted from input~~ at each of said first ports and has them outputted outputs the light signals from any one of said second ports;

a light path control section for branching a path of said light switch so as to have the light signals ~~inputted from signal input at~~ any one of said first ports ~~outputted~~ output from any two of said second ports when supervising ~~[[said]]~~ the light signals ~~signal~~ and have the light signals ~~inputted from input at~~ each of said first ports ~~outputted~~ output from a predetermined one of said second ports when not supervising ~~[[said]]~~ the light signal ~~signals~~; and

a light signal supervising section for supervising a quality of the light signals ~~outputted~~ output from either of said two second ports only when ~~performing said~~ supervising the light signals.

4-6. (canceled)

7. (currently amended) The optical cross-connect apparatus according to ~~claims~~ claim 3, wherein said light signal supervising section detects and supervises management information placed in an overhead section of a predetermined frame format.

8-16. (canceled)

17. (currently amended) A signal supervising method, comprising the steps of:

~~a light switching of~~ switching paths of light signals ~~inputted from~~ input at each of a plurality of first ports and having them outputted from any one of a plurality of second ports;

~~a light path controlling of branching a path of~~ said light ~~switch~~ switching step so as to have the light ~~signals~~ ~~inputted from~~ signal input at any one of said first ports ~~outputted~~ output from any two of said second ports when supervising ~~[[said]]~~ the light signal and to have the light signals ~~inputted from~~ input at each of said first ports ~~outputted~~ output from a predetermined one of said second ports when not supervising ~~[[said]]~~ the light ~~signal~~ signals; and

~~a light signal supervising of~~ supervising a quality of the light signals ~~outputted~~ output from either of said two second ports only when performing said supervising.

18-20. (canceled)

21. (currently amended) The signal supervising method according to ~~claims~~ claim 17, wherein ~~said light signal the~~ supervising ~~process~~ step detects and supervises management information placed in an overhead section of a predetermined frame format.

22. (currently amended) The signal supervising method according to ~~claims~~ claim 21, wherein ~~said light path control process the~~ controlling step sets a path for having the light signals ~~to be supervised inputted from each port outputted~~ output from said two second ports per port in order.

23-24. (canceled)

25. (new) An optical cross-connect apparatus, comprising:

a signal light switch having n input ports, n being at least two, and $n+1$ output ports, said light switch directing light signals received at one of said input ports to at least one of said output ports;

only one of said $n+1$ output ports having a light signal detector connected thereto, said detector detecting at least one of light signal quality and management information; and

a switch controller that controls said switch so that a light signal received at a selected one of said input ports is directed to two of said output ports, including said one output port having said detector connected thereto.

26. (new) The apparatus of claim 25, wherein said switch controller selects each of said input ports one at a time so that said switch selectively directs light signals received at each of said input ports to two of said output ports, including said one output port having said detector connected thereto.

27. (new) The apparatus of claim 25, further comprising a light signal amplifier that amplifies a light signal on the one of said two output ports not connected to said detector in response to feedback from said detector.

28. (new) The apparatus of claim 25, further comprising a wavelength separating section for separating light signals of respective wavelength components from a multiplexed plurality of mutually different wavelength components in an input light signal, and a wavelength multiplexing section for multiplexing the output light signals.

29. (new) A method of cross-connecting input light signals, comprising the step of:

directing light signals received at n input ports, n being at least two, to at least one of $n+1$ output ports;

detecting at least one of light signal quality and management information only at one of said $n+1$ output ports; and

controlling the light signals so that a light signal received at a selected one of the input ports is directed to two

of the output ports, including the one output port at which the detecting occurs.

30. (new) The method of claim 29, wherein said controlling step includes selecting each of the input ports one at a time and selectively directing light signals received at each of the input ports to two of the output ports, including the one output port at which the detecting occurs.

31. (new) The method of claim 29, further comprising the steps of feeding back information from a detector that performs the detecting step to a controller than performs the controlling step, and amplifying a light signal on the one of the two output ports at which the detecting does not occur in response to the feedback.

32. (new) The method of claim 29, further comprising the steps of separating light signals of respective wavelength components from a multiplexed plurality of mutually different wavelength components in an input light signal, and multiplexing the output light signals.

33. (new) An optical cross-connect apparatus, comprising:

a signal light switch having n first ports, n being at least two, and n second ports, said light switch directing light signals received at one of said first ports to at least one of

said second ports and directing light signals received at one of said second ports to at least one of said first ports;

only one of said first ports having a light signal detector connected thereto and only one of said second ports having a light signal detector connected thereto, said detector detecting at least one of light signal quality and management information; and

a switch controller that controls said switch so that a light signal received at a selected one of said first ports is directed to two of said second ports, including said one second port having said detector connected thereto, and so that a light signal received at a selected one of said second ports is directed to two of said first ports, including said one first port having said detector connected thereto.

34. (new) The apparatus of claim 3, wherein only one of said second ports has connected thereto a detector that detects one of light signal quality and light signal management information, and wherein said two second ports include the one of said second ports having said detector connected thereto.

35. (new) The apparatus of claim 3, wherein said light path control section selects each of said first ports one at a time so that said light switch selectively directs light signals received at each of said first ports to two of said second ports,

including said one second port having said detector connected thereto.